

legs. However, it is wrong to call these two support legs and an apical leg. Conversely, there is a single support 6 and two apical legs 16 which are at the upper end of the leg 6. Furthermore, legs 12 and 16 all lie in the same plane. There is no written disclosure of this feature in Thallemer but an examination of Figure 6 which shows a plan of the item makes this quite clear. In addition, insofar as can be seen from Figure 12, the legs are clearly lying in a plane. As a consequence, the legs do not define a tetrahedron with the three legs lying on three adjacent edges of the tetrahedron.

5 Therefore, it is unlikely that the units of Thallemer can effectively be connected to form a geodesic dome. The arrangement claimed in the present application can be used to form a geodesic dome. Thus, the claimed invention can obtain the benefits of geodesic geometry with the benefits inter alia discussed below. It will be seen that a relatively complex geodesic dome structure is achieved by combining the relatively simple "Y"-shaped tetrahedral structural units claimed into the complex geodesic shape.

6 Again, the apical legs of the units are not joined to corresponding legs of other units at a join position. The Examiner argues that the legs 12 are joined by the connecting members 34 and 49. This is plainly not a "join position" (as mentioned in Claim 1) as there is the intermediary plate 4 between them. This point too is illustrated in Figure 6 of the drawings of Thallemer. Moreover, the items 49 are hose-like pressure medium lines which clearly are not intended to provide a secure structural connection between the parts. From Figure 3 there appears to be no connection between adjacent parts 33 save through the cables 27. The parts 33 are also connected to the roof units 4 via cable 34. However, there is clearly no "join position" at which these parts are connected. While it is conceded that the language a "join position" does not necessarily mean that the units are actually joined together, where they are spaced far apart as in Thallemer there can be no question that these are not connected at a "join position". In this

regard reference is again made to Figure 6 of Thallemer which shows the ends 33 of the arms 16 spaced far apart from one another.

7 The arrangement of the legs as shown in Thallemer merely provides a vertical supporting structure. The arrangement of the invention as claimed enables a geodesic structure to be formed. Such a structure formed by the structural elements of the invention achieve an acceptable level of stability, consequently the structure does not necessarily or indeed normally require guy ropes and stays. These are perforce required in Thallemer as shown at 25 and 27 (or 27<sup>1</sup> or 27<sup>11</sup>). The stays or traction elements 25 are attached to the pillar 12 at the node section 18. The arms 16 of the pillar 12 are held together to prevent them splaying apart by the traction elements 27. The ends of the arms 16 are connected by the traction elements 27, 27<sup>1</sup> - 27<sup>11</sup> as shown in Figure 6.

8 Although the erection of the structure shown in Thallemer is not discussed in any detail, it is submitted that the arrangement is such that the various items have to be erected item by item, with the necessary stays provided. On striking or taking down the structure the various parts must be deflated item by item which must be separated for transport.

9 Furthermore, it is apparent from Figure 6 that any structure made according to Thallemer would have numerous columns located under the roof.

10 With the arrangement of the invention on the other hand, the structure can be erected without stays; a single inflation point may be used (although others may be provided to speed up inflation), to inflate the item and the structure may be deflated as a single unit for transport and storage. It will be much quicker and easier to inflate the structure of the present invention. No stays are required and the entire inflation or deflation of the item can be done within a very short period of time. In Thallemer on the other hand there is the problem of providing the stays,

connecting these and then connecting the various parts which is a much more complex erection operation.

11 In these circumstances it is submitted that claim 1 is not anticipated by Thallemer.

12 Certain of the other points made by the Examiner are now considered. If reference is made to the middle structure Figure 1 of Thallemer, attention should be drawn to the fact that the leg 33 shown there is the same as the legs 33. The reason why the item 33 looks of different length to the items 2, 12 is that of course it is inclined to the vertical as shown in the structures on either side thereof and not vertical as is the leg 2, 12.


13 There is no indication whatsoever that the warp of the fabric in Thallemer is aligned with the tube access. There is no connector unit at the free end of any of the legs of the element of Thallemer which term presupposes that there is a connection between the structural units.

14 Finally there is no part shown in Thallemer which could be remotely considered to be a "beam" that connects the apical legs of the structures. It is the applicant's contention that the context "beam" means inflatable beam, but should the Examiner so require the applicant will amend this claim by adding the word "inflatable" before the word "intermediate".

15 Leary US 6,061,969 describes an inflatable greenhouse. This comprises an inflatable double walled dome-shaped upper portion 12 and a separately ring-shaped lower portion 14. (see column 4 lines 9 and 10). The item 16 shown in the drawings are spot welds. The joins between the spot welds are not described. There is no disclosure in Leary of any structural units comprising three legs. Therefore Leary does not anticipate claim 1 nor does it anticipate any of the other claims.

16 In the circumstances it is submitted that the claims of this application as presently put forward are novel and inventive having regard to the references that has been cited and applied. The Examiner is respectfully requested to reconsider the application and allow all the claims presented.

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